HISTORIA MATHEMATICA **15** (1988), 188–194

ABSTRACTS

Edited by ALBERT C. LEWIS AND DAVID E. ZITARELLI

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In order to facilitate reference and indexing, entries are given abstract numbers which appear at the end following the symbol #. A triple numbering system is used: the first number indicates the volume, the second the issue number, and the third the sequential number within that issue. For example, the abstracts for Volume 12, Number 1, are numbered: 12.1.1, 12.1.2, 12.1.3. etc.

For reviews and abstracts published in Volumes 1 through 13 there is an *author index* in Volume 13, Number 4, and a *subject index* in Volume 14, Number 1.

The initials in parentheses at the end of an entry indicate the abstractor. In this issue there are abstracts by Víctor Albis, Jens Høyrup, Albert C. Lewis, and Ivica Martinović.

AABOE, ASGER. 1986. Las matemáticas babilónicas. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 1–33. Reproduced from *Matemáticas: Episodios históricos desde Babilonia hasta Ptolomeo*. Cali: Editorial Norma. BABYLONIAN MATHEMATICS. (VA) #15.2.1

ABALLAGH, M., AND DJEBBAR, A. 1987. Découverte d'un écrit mathématique d'AL-ḤAṢṢĀR (XIIe S.): Le livre I du Kāmil. *HM* **14**, 147–158. MOSLEM OCCIDENT. (ACL) #15.2.2

ALBERS, D. J., ALEXANDERSON, G. L., AND REID, C. 1987. *International mathematical congresses: An illustrated history 1893–1986*. Revised edition. New York: Springer-Verlag. 63 pp. Illustrated. Hardbound $29.95. Includes photographs of some participants and descriptions of important events at each of the congresses from Chicago 1893 to Berkeley 1986. Appended are photographs and descriptions of the Fields medalists and a listing of the plenary lectures. (ACL) #15.2.3

ALMKVIST, GERT. 1987. Correspondence of Carleman. *HM* **14**, 284. TORSTEN CARLEMAN. (ACL) #15.2.4

ANELLIS, IRVING H. 1987. MATHEMATICAL LOGIC in the Soviet Untion, 1917–1980. *HM* **14**, 287. Project. (ACL) #15.2.5

ANON. 1987. XVIIIth International Congress of History of Science: Symposium No. 18 on Transmission of Mathematical Sciences July 31–August 8, 1985. *HM* **14**, 185–191. (ACL) #15.2.6

0315-0860/88 $3.00

ATTEN, MICHEL. 1988. La nomination de H. Poincaré à la chaire de physique mathématique et calcul des probabilités de la Sorbonne. *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 221–230. The nomination of H. POINCARÉ to the chair of mathematical physics and calculus of probabilities at the Sorbonne. (ACL) #15.2.7

BARON, MARGARET E. 1987. *The origins of the infinitesimal calculus*. New York: Dover. 304 pp. Illustrated. Paperback $7.95. An unaltered republication of the work first published in 1969 by Pergamon Press of Oxford. A study of the INFINITESIMAL CALCULUS of the 17th century prior to the work of Newton and Leibniz. (ACL) #15.2.8

BEKEMEIER, B. 1987. *Martin Ohm (1792–1872): Universitäts- und Schulmathematik in der neuhumanistischen Bildungsreform*. Göttingen: Vandenhoeck & Ruprecht. xxii + 326 pp. Paperbound 84 DM. Studien zur Wissenschafts-, Sozial- und Bildungsgeschichte der Mathematik, 4. An account of MARTIN OHM in the context of university and school mathematics of the neo-humanistic educational reform of 19th-century Germany. M. Otte has contributed a 12-page introduction on Ohm's "spirit of analysis." (ACL) #15.2.9

BERGGREN, J. L., AND GOLDSTEIN, B. R. (Eds.) 1987. *From ancient omens to statistical mechanics: Essays on the exact sciences presented to Asger Aaboe*. Copenhagen: University Library. xix + 298 pp. Paperbound. Acta historica scientiarum naturalium et medicinalium, 39. Includes a five-page biography of ASGER AABOE and a list of his publications. The 25 essays are divided into three categories: Babylonian and Greek antiquity (P. J. Huber, O. Schmidt, J. P. Britton, O. Neugebauer, K. P. Moesgaard, N. T. Hamilton, N. M. Swerdlow, G. J. Toomer, K. Andersen, D. Pingree, J. L. Berggren); Middle Ages and Renaissance (E. S. Kennedy, D. A. King, C. Anagnostakis, H. M. Stimson, J. D. North, B. R. Goldstein); modern times (A. E. Shapiro, L. Feigenbaum, D. deB. Beaver, M. P. Winsor, M. Borrell, J. L. Jervis, E. F. Kranakis, O. Pedersen, O. Knudsen, M. J. Klein). (ACL) #15.2.10

BETSCH, GERHARD. 1987. ALEXANDER VON BRILL (1842–1935). In *Bausteine zur Tübinger Universitätsgeschichte* (Volker Schäfer, Ed.), pp. 71–90. Brill was professor of mathematics at Tübingen University. (ACL) #15.2.11

BIENKOWSKA, BARBARA. 1986. Controversia en torno del heliocentrismo en la cultura europa. *Mathesis: Filosofía e historia de las mathemáticas* (México) **2**(1), 35–54. Reproduced from pp. 167–182 in *Nicolás Copérnico, en el quinto centenario de su nacimiento 1473–1973*. México: Siglo XXI, 1973. COPERNICUS and European culture. (VA) #15.2.12

BOTTAZZINI, UMBERTO. 1987. *The higher calculus: A history of real and complex analysis from Euler to Weierstrass*. New York/Berlin/Heidelberg: Springer-Verlag. 332 pp. $39.00. Translated by Warren Van Egmond. Reviewed by C. Truesdell in *Bulletin of the American Mathematical Society* **17,** 186–189. Second, revised and augmented edition of the first, 1981, edition in Italian. (ACL) #15.2.13

BOWEN, ALAN C. 1987. The Interaction of Science and Philosophy in Fifth and Fourth Century Greece, May 30–June 1, 1986. *HM* **14,** 291–292. Report on conference. GREEK. (ACL) #15.2.14

BRUINS, E. M. 1981. Reducible and trivial decompositions concerning EGYPTIAN ARITHMETICS. *Janus* **68,** 281–297. *Mathematical Reviews* 84c:01003. (ACL) #15.2.15

BURCHSTED, F. F. 1987. Archives of American Mathematics. *HM* **14,** 366–374. (ACL) #15.2.16

CARTAN, HENRI, AND FERRAND, J. 1988. Le cas ANDRÉ BLOCH. *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 211–219. French version of #15.2.18 plus a bibliography of Bloch's works. (ACL) #15.2.17

CARTAN, HENRI, AND FERRAND, J. 1988. The case of ANDRÉ BLOCH. *The Mathematical Intelligencer* **10,** Number 1, 23–26. (ACL) #15.2.18

CASSINET, JEAN. 1985. Un inédito de Roberval sobre el Libro V de los Elementos de Euclides y su transmisión hacia Italia (1645). *LULL* **8,** 5–19. Study of an unpublished text by ROBERVAL on the properties of the ordered semigroup of RATIOS based on the definitions in EUCLID'S *Elements*, Book V, noteworthy for its density. (VA) #15.2.19

CHARBONNEAU, LOUIS. 1987. Congrès Annuel-1986. Canadian Society for the History and Philosophy of Mathematics/Société Canadienne d'Histoire et de Philosophie des Mathématiques. *HM* **14,** 375–380. Report. (ACL) #15.2.20

CHEMLA, KARINE. 1987. Conference on the History of MEDITERRANEAN Mathematics. Centre International de Rencontres Mathématiques, Luminy, Marseille, April 16–21, 1984. *HM* **14,** 191–193. (ACL) #15.2.21

CREPEL, PIERRE. 1987. Le premier manuscrit de Condorcet sur le calcul des probabilités (1772). *HM* **14,** 282–284. The first manuscript of CONDORCET on the calculus of PROBABILITIES. (ACL) #15.2.22

CUESTRA DUTARI, NORBERTO. 1984. *La invención del cálculo infinitesimal y su introducción en España*. Salamanca: Ediciones de la Universidad de Salamanca. The invention of the infinitesimal calculus and its introduction in SPAIN. The first chapters of this book again take on the theme of the NEWTON AND LEIBNIZ priority controversy on the invention of CALCULUS, with some bias toward Leibniz's side. The rest of the book relates to the introduction and teaching of calculus in Spain, which begins to fill the historiographic gap between TOSCA and CORCHARAN and the works of J. JUAN and B. BAILS. (VA) #15.2.23

DAHAN-DALMEDICO, A. 1987. Mécanique et théorie des surfaces: Les travaux de Sophie Germain. *HM* **14,** 347–365. Work of SOPHIE GERMAIN on mechanics and theory of surfaces. DIFFERENTIAL GEOMETRY. EULER. (ACL) #15.2.24

DAUBEN, J. W. 1986. La filosofía de C. S. Peirce sobre los conjuntos infinitos. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 191–212. Spanish translation of pp. 123–135 in *Mathematics Magazine* **50** (1977). C. S. PEIRCE's philosophy of INFINITE SETS. (VA) #15.2.25

DHOMBRES, JEAN. 1988. Un texte d'Euler sur les fonctions continues et les fonctions discontinues, véritable programme d'organisation de l'analyse au 18e siècle. *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 23–97. A translation into French with introduction and notes of a 1767 text of EULER on continuous and discontinuous functions, "De usu functionum discontinuarum in analysi." (ACL) #15.2.26

DJEBBAR, A. *See* #15.2.2.

DOU, ALBERT. 1987. Evolució dels fondaments de la matemàtica i relacions amb la fisica. In *Inauguració del curs acadèmic 1987–1988*, pp. 5–49. Barcelona: Universitat Autònoma de Barcelona. An illustrated talk on the foundations of mathematics and its relations with physics. (ACL) #15.2.27

DUGAC, PIERRE. 1985. La influencia cientifica de Henri Poincaré a luz de su correspondencia con matemáticos. *LULL* **8,** 21–33. POINCARÉ'S influence on 19th-century mathematics pinpointing some outstanding facts found in his correspondence with APPELL, CANTOR, DARBOUX, HERMITE, C. JORDAN, F. KLEIN, LEVI-CIVITA, MITTAG-LEFFLER, E. PICARD, S. PINCHERLE, among others. (VA) #15.2.28

ENRIQUES, FEDERICO. 1986. La reforma de la logica contemporánea. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 55–115. Reproduced from pp. 119–202 in *Para la historia de la lógica*, Buenos Aires: Espasa-Calpe, 1949. The reform of contemporary LOGIC. FOUNDATIONS OF geometry. PASCH. BOOLE. PEANO. RUSSELL. (VA) #15.2.29

ENRIQUES, FEDERICO. 1986. De la lógica inductiva a la lógica de los sistemas cientificos. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 213–261. Reproduced from pp. 103–272 in *Para la historia de la lógica,* Buenos Aires: Espasa-Calpe, 1958. From inductive LOGIC to scientific systems logic. W. WHEWELL; J. S. MILL; W. S. JEVONS, E. MACH; E. POINCARÉ; J. C. MAXWELL; C. S. PEIRCE; G. W. F. HEGEL; I. KANT; B. RUSSELL. (VA) #15.2.30

FEIGENBAUM, LENORE. 1985. La correspondencia científica Taylor-Monmort y la comunidad matemática a principios del siglo XVIII. *LULL* **8,** 35–45. The NEWTON AND LEIBNIZ priority dispute on the invention of the CALCULUS, from the perspective of the correspondence between Newtonian BROOK TAYLOR and neutral Frenchman PIERRE R. DE MONMORT. DE MOIVRE; J. and N. BERNOULLI; R. COTES; J. KEILL; J. STIRLING. (VA) #15.2.31

FERRAND, J. *See* #15.2.17 and #15.2.18.

FRANK, EVELYN. 1982. OSKAR PERRON. *Journal of Number Theory* **14,** 281–291. *Mathematical Reviews* 84b:01047. (ACL) #15.2.32

FUKAGAWA, HIDETOSI. 1987. ALGEBRAIC CURVES in JAPAN during the Edo period. *HM* **14,** 235–242. (ACL) #15.2.33

GARIO, PAOLA. 1988. Histoire de la résolution des singularités des surfaces algébriques (une discussion entre C. Segre et P. Del Pezzo). *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 123–137. On the resolution of SINGULARITIES OF ALGEBRAIC SURFACES, a discussion between C. SEGRE and P. DEL PEZZO. (ACL) #15.2.34

GILLIES, D. A. 1987. Was Bayes a Bayesian? *HM* **14,** 325–346. THOMAS BAYES. (ACL) #15.2.35

HALPERIN, ISRAEL. 1987. JOHN VON NEUMANN memorabilia. *HM* **14,** 287. (ACL) #15.2.36

HANKEL, HERMANN. 1988. Recherches sur les fonctions ayant une infinité d'oscillations et sur les fonctions discontinues. *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 139–209. Translation into French with notes of Hankel's 1870 paper on functions of infinite oscillations and discontinuous functions. (ACL) #15.2.37

HAYASHI, TAKAO. 1987. VARĀHAMIHIRA's pandiagonal MAGIC SQUARE of the order four. *HM* **14,** 159–166. INDIAN. (ACL) #15.2.38

HEINZMANN, GERHARD. 1988. Poincaré et la philosophie des mathématiques. *Cahiers du Séminaire d'Histoire des Mathématiques* **9,** 99–121. POINCARÉ and the philosophy of mathematics. (ACL) #15.2.39

HOFMANN, J. E. 1987. Wie ist wohl Demokrit zum Rauminhalt der Pyramide gekommen? *HM* **14,** 173–174. How DEMOCRITUS arrived at the volume of the pyramid. EUCLID. (ACL) #15.2.40

HOGENDIJK, JAN P. 1987. Observations on the ICOSAHEDRON in EUCLID's *Elements*. *HM* **14,** 175–177. (ACL) #15.2.41

HOUSER, NATHAN. 1987. A note on the KOENIGSBERGER-ZEUNER *REPERTORIUM*. *HM* **14,** 178–179. (ACL) #15.2.42

HØYRUP, JENS. 1987. *Philosophy: Accident, epiphenomenon or contributory cause of the changing trends of mathematics. A sketch of the development from the twelfth through the sixteenth century.* Roskilde: Institute of Educational Research, Media Studies and Theory of Science. 99 pp. Paperbound. On the influence of philosophical currents and attitudes on the changing styles, ideals, and norms for mathematical activity from ca. 1100 to ca. 1600. Available from the author: Roskilde University Centre, DK-4000 Roskilde, Denmark. (JH) #15.2.43

HUGHES, BARNABAS. 1987. An early 15th-century ALGEBRA codex: A description. *HM* **14,** 167–172. DARDI OF PISA; M. FINZI. (ACL) #15.2.44

JOSEPHY, M. *See* #15.2.75.

KATZ, VICTOR J. 1987. The calculus of the TRIGONOMETRIC FUNCTIONS. *HM* **14,** 311–324. (ACL) #15.2.45

KEDROVSKII, O. I. 1984. *Wechselbeziehungen von Philosophie und Mathematik im geschichtlichen Entwicklungsprozess*. Leipzig: Teubner. 288 pp. Paperbound 46 M. A German translation of excerpts from the two-volume work originally published in Russian in 1973–1974 and devoted to the relation between MATHEMATICS AND PHILOSOPHY from antiquity to the 18th century from a Marxist point of view. The second volume of the original was reviewed in *HM* **3,** 344–350. (ACL) #15.2.46

KNOBLOCH, EBERHARD. 1987. Emile Borel as a probabilist. In *The probabilistic revolution*, Vol. 1, *Ideas in history*, L. Krüger, L. J. Daston, and M. Heidelberger (Eds.), pp. 215–233. Cambridge, Massachusetts/London: MIT Press. An account of EMILE BOREL's contribution to PROBABILITY THEORY including his concern with the problems of continuity versus discontinuity and with determinism and physics. J. M. KEYNES; H. REICHENBACH; J. C. MAXWELL. (ACL) #15.2.47

LAGLER, WILFRIED. 1987. Ein bibliophiler Mathematiker: Christoph Friedrich von Pfleiderer (1736–1821) und die Erwerbung seiner Bibliothek durch die Universitätsbibliothek Tübingen. In *Bausteine zur Tübinger Universitätsgeschichte* (Volker Schäfer, Ed.), pp. 59–70. Tübingen: Universitätsarchiv Tübingen. A bibliophile mathematician: CHRISTOPH FRIEDRICH VON PFLEIDERER and the acquisition of his library by Tübingen University. (ACL) #15.2.48

LAMARRA, A. 1987. L'infinito in Leibniz: Problemi e terminologia. Das Unendliche bei Leibniz: Probleme und Terminologie. Simposio Internazionale, November 6–8, 1986, Rome. *HM* **14,** 293–294. Report on a conference on INFINITY IN LEIBNIZ. (ACL) #15.2.49

LAUGWITZ, DETLEF. 1986. *Zahlen und Kontinuum: Eine Einführung in die Infinitesimalmathematik*. Mannheim/Vienna/Zurich: Bibliographisches Institut. 269 pp. Bibliography. Paperbound 38 DM. Lehrbücher und Monographien zur Didaktik der Mathematik, 5. This introduction to NONSTANDARD ANALYSIS is a sequel to the author's 1978 work *Infinitesimalkalkül*. There are more historical examples and a chapter is devoted to the history of INFINITESIMAL MATHEMATICS. (ACL) #15.2.50

LAUGWITZ, DETLEF. 1987. Infinitely small quantities in CAUCHY's textbooks. *HM* **14,** 258–274. (ACL) #15.2.51

LEFSCHETZ, SOLOMON. 1986. Ética y matemáticas. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 151–161. ETHICS AND MATHEMATICS. This previously unpublished manuscript has been edited by S. Ramírez and M. de la Luz de Teresa. Date unknown. (VA) #15.2.52

LINDBERG, DAVID C. On the applicability of mathematics to nature: ROGER BACON and his predecessors. *British Journal for the History of Science* **15,** 3–25. *Mathematical Reviews* 84b:01013. (ACL) #15.2.53

LOEFFEL, HANS. 1987. *Blaise Pascal 1623–1662*. Basel/Boston: Birkhäuser. 176 pp. 84 illustrations. Hardbound sFr 40. Vita mathematica, 2. A mathematical biography of BLAISE PASCAL which includes descriptions of his projective geometry, calculator, arithmetic triangle, probability, and infinitesimal calculations. (ACL) #15.2.54

MAINZER, KLAUS. 1987. Symmetrie Symposion: Technische Hochschule Darmstadt 13.–17. Juni 1986. *HM* **14,** 183–185. Report on SYMMETRY conference. (ACL) #15.2.55

MARACCHIA, SILVIO. 1979. DANTE and mathematics. *Archimede* **31,** 195–208. In Italian. *Mathematical Reviews* 84b:01014. (ACL) #15.2.56

MARTINOVIĆ, IVICA. 1987. The fundamental deductive chain of Bosković's natural philosophy. In *The philosophy of science of Rugjer Bosković*. Proceedings of the International Symposium of the Institute of Philosophy and Theology SJ, held in Zagreb, December 11–13, 1986. Zagreb: FTI, pp. 65–99. It follows from Bosković's early treatises *De viribus vivis* (1745) and *Dissertationis de lumine pars secunda* (1748) that the fundamental deductive chain of his natural philosophy consists of five steps: (1) analogy and simplicity of nature; (2) the principle of continuity; (3) shaping of the continuous curve of forces; (4) the model of composition of larger particles from smaller ones; (5) the structure of matter represented by indivisible and non-extended points, mutually separated by an interval. R. BOSCOVICH. (IM) #15.2.57

MARTZLOFF, J. C. 1981. La géométrie euclidienne selon Mei Wending. *Historia Scientiarum*, No. 21, 27–42. The non-euclidean geometry of MEI WENDING. *Mathematical Reviews* 84c:01012. (ACL) #15.2.58

MAWHIN, JEAN. 1988. Problème de Cauchy pour les équations différentielles et théories de l'intégration: Influences mutuelles. *Cahiers du Séminaire d'Histoire des Mathématiques* **9**, 231–246. The problem of CAUCHY for differential equations and the theory of integration. (ACL) #15.2.59

MESCHKOWSKI, HERBERT. 1986. *Problemgeschichte der Mathematik III*. Mannheim/Vienna/Zurich: Bibliographisches Institut. 314 pp. Illustrated. Hardbound 38 DM. This is a new edition, with "substantial corrections," of the first, 1978, edition which appeared with the title *Problemgeschichte der neueren Mathematik*. This GENERAL HISTORY series was reviewed in *HM* **10**, 480–482. (ACL) #15.2.60

PANTEKI, M. 1987. WILLIAM WALLACE and the introduction of continental CALCULUS to Britain: A letter to GEORGE PEACOCK. *HM* **14**, 119–132. (ACL) #15.2.61

PICUTTI, ETTORE. 1979. ANGELO GENOCCHI and two contested priorities of FERMAT. *Archimede* **31**, 178–182. In Italian. *Mathematical Reviews* 84b:01029. (ACL) #15.2.62

PIER, JEAN-PAUL. 1988. L'apparition de la théorie des groupes topologiques. *Cahiers du Séminaire d'Histoire des Mathématiques* **9**, 1–21. The theory of TOPOLOGICAL GROUPS. (ACL) #15.2.63

POINCARÉ, HENRI. 1981. *Filosofía de la ciencia*. México: CONACYT. 283 pp. Spanish translation of a book originally appearing in French containing excerpts from Poincaré's *La science et l'hypothèse* (1906), *Science et méthode* (1908), *La valeur de la science*, plus two papers: "Spazio e tempo" (*Scientia*, 1912) and "La morale et la science" (*Foi et vie*, 1910). There is a foreword by Jean Dieudonné. (VA) #15.2.64

PURKERT, WALTER. 1982. Einige Aspekte der Anwendungen der Mathematik. Pp. 95–102 in *The age of the Industrial Revolution*. Berlin: Beiträge Wissenschaftsgeschichte, Deutscher Verlag Wissenschaft. Aspects of APPLICATIONS of mathematics. *Mathematical Reviews* 84b:01031. (ACL) #15.2.65

RAMIREZ, SANTIAGO, AND TERESA, MARIA DE LA LUZ DE. 1986. Solomon Lefschetz. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 163–175. Notice of a research project on LEFSCHETZ and his influence on the development of contemporary MEXICAN MATHEMATICS. List of publications as it appears in the Lefschetz files at the Universidad Nacion Autónoma de México. (VA) #15.2.66

ROTMAN, BRIAN. 1987. *Signifying nothing: The semiotics of zero*. New York: St. Martin's Press. x + 111 pp. Hardbound $29.95. Paperbound $12.95. According to the Preface: "an inquiry into the nature of ZERO in terms of its semiotic character and the systemic, structural, paradigmatic relations it enjoys as a *sign* among other signs and signifying patterns." (ACL) #15.2.67

RUIZ-ZÚÑIGA, A. *See* #15.2.75.

SCHOLZ, E. 1987. Project on interrelations between the development of THEORETICAL MATHEMATICS AND APPLICATIONS during the nineteenth century. *HM* **14**, 196–197. CRYSTALLOGRAPHY. CARL CULMANN. (ACL) #15.2.68

SENETA, E. 1987. Chuprov on finite exchangeability, expectation of ratios, and measures of association. *HM* **14**, 243–257. A. A. CHUPROV. (ACL) #15.2.69

SHOESMITH, EDDIE. 1987. The continental controversy over ARBUTHNOT's argument for divine providence. *HM* **14**, 133–146. (ACL) #15.2.70

SMITHIES, F. 1982. The background to CAUCHY's definition of the INTEGRAL. Pp. 93–100 in *From A to Z (Leiden, 1982)*. Amsterdam: Math. Centrum. *Mathematical Reviews* 84b:01035. (ACL) #15.2.71

STEPHENSON, BRUCE. 1987. *Kepler's physical astronomy*. New York/Berlin/Heidelberg: Springer-Verlag. 216 pp. Illustrated. Hardbound $58.00. Studies in the history of mathematics and physical sciences, 13. Analyzes J. KEPLER's astronomical works and emphasizes the role of physics. (ACL) #15.2.72

TATTERSALL, J. J. 1987. THOMAS JEFFERSON and DOUWES' method for determining latitude. *HM* **14**, 275–281. (ACL) #15.2.73

TURING, A. M. 1986. Máquinas computadoras e intelligencia. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 117–149. COMPUTING MACHINERY and intelligence. Spanish translation of Turing's article in *Mind* **59** (1950). (VA) #15.2.74

VILLARINO, M., JOSEPHY, M., AND RUIZ-ZÚÑIGA, A. 1987. A Spanish edition of *Disquisitiones arithmeticae*. *HM* **14**, 195. GAUSS. (ACL) #15.2.75

WELTI, ERNST. 1986. *Die Philosophie des strikten Finitismus: Entwicklungstheoretische und mathematische Untersuchungen über Unendlichkeitsbegriffe in Ideengeschichte und heutiger Mathematik*. Bern/Frankfurt am Main/New York: Peter Lang. Europäische Hochschulschriften. The philosophy of STRICT FINITISM: Developmental-theoretical and mathematical investigations of the concept of INFINITY in the history of ideas and contemporary mathematics. (ACL) #15.2.76

WEYL, HERMANN. 1986. Espacio y tiempo, el mundo exterior transcendente. *Mathesis: Filosofía e historia de las matemáticas* (México) **2**(1), 281–330. Space and time: The exterior transcendent world. Partial Spanish translation of Weyl's book *Philosophy of mathematics and natural science*. (VA) #15.2.77